

REMARKS

The rejection of claims 1-6 under 35 USC §102(b) in view of U.S. Patent No. 5,884,174 (Nagarajan) is respectfully traversed on the grounds that the Nagarajan patent fails to disclose or suggest an admission control method that employs **two** thresholds to determine whether a new call may be admitted to a cell, as claimed. Instead, of employing both a cluster level threshold and a cell level threshold to establish cell admission, as recited in step (A) of claim 1, the admission control method of Nagarajan admits new calls based on only a single cell level threshold.

The purpose of the claimed invention is to decrease the probability of hand-off dropping resulting from congestion in cluster-based micro/picocellular wireless networks by admitting new calls only when the double-threshold requirement is met, *i.e.*, when the call exceeds both cluster and cell level channel availability thresholds. In contrast, the Nagarajan patent discloses a cell-level admission method in which a respective base station (or group of base stations) provides wireless coverage substantially through a corresponding cell, and a β parameter representative of channel occupancy is applied to determine the probability of accepting a new call when the number of occupied channels is equal to a single threshold number T, as illustrated in Figs. 4A-4B of the Nagarajan patent, and described in the corresponding description.

Because Nagarajan uses a single threshold T to establish new call admissions, the problem solved by the present invention, namely reducing overhead due to frequent hand-offs, still exists in the system of Nagarajan. In effect, the single cell level threshold of Nagarajan is similar to the reservation of guard channels disclosed in the Posner *et al.* publication discussed on page 1 of the original specification. Since calls arrive at a cell randomly, a group of cells within a cluster may become congested even though individual cells are refusing admission for lack of available channels, resulting in dropped calls for lack of an available hand-off. In order to prevent this problem, it is necessary to not only monitor the available channels within a cell,

but also traffic in the cluster as a whole. The Nagarajan patent does not suggests such a second “threshold.”

It is true that the threshold T of Nagarajan described in col. 5, line 24, and illustrated in block 223 of Fig. 2, is designated as a “*first* threshold.” However, this does not mean that the Nagarajan patent discloses a “second threshold” corresponding to the claimed cluster level threshold. Instead, Nagarajan refers to a trial value of T, used to establish the first threshold, and does not anywhere disclose a second cluster level threshold for determining admittance to a cell. To the contrary, col. 5, lines 19-30 of Nagarajan very clearly state that:

If the number of occupied channels is greater than the first threshold as determined at block 227, the program advances to block 209, where the new call is admitted. . . If the number of occupied channels is less than the first threshold as determined at block 229. . . the new call is not admitted. . .

This passage very clearly indicates that new call admission in Nagarajan is based solely on a **single** threshold, since admission is granted whenever the cell-level threshold is exceeded, and admission is denied whenever the cell-level threshold is not exceeded. Cluster traffic has no effect on new call admissions, and therefore there is no possible teaching or suggestion in the Nagarajan patent, whether express or implied, for taking into account a second threshold corresponding to the claimed second cluster-level threshold. Because the Nagarajan patent does not disclose all elements recited in claims 1-6, withdrawal of the rejection under 35 USC §102(b) is respectfully requested.

Having thus overcome the sole rejection made in the Official Action, expedited passage of the application to issue is requested.

Respectfully submitted,

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Date: February 17, 2004

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